

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method, comprising:
applying an adhesive gel material including particles to at least a portion of a first side of a semiconductor wafer having first and second sides, the particles capable of allowing the adhesive gel material to release the semiconductor wafer and preventing substantial collapse of the adhesive gel material if a vacuum suction is applied to the first side of the semiconductor wafer;
positioning the semiconductor wafer ~~on to~~ onto a platform with the first side facing the platform and with the adhesive gel material between the first side and the platform to allow the adhesive gel material to hold the semiconductor wafer to the platform;
grinding the second side of the semiconductor wafer; and
allowing the adhesive gel material to release the semiconductor wafer, substantially free of the adhesive gel material, from the platform.
2. (Currently amended) The method of claim 1-1, wherein said allowing the adhesive gel material to hold the semiconductor wafer to the platform comprises using an adhesive property of the adhesive gel material to hold the semiconductor wafer to the platform.
3. (Currently amended) The method of claim 2, wherein said positioning the semiconductor wafer onto the platform includes positioning the semiconductor onto a platform having ~~includes a vacuum~~, and wherein said using the adhesive property to hold the semiconductor wafer to the platform includes holding the semiconductor wafer in position using the adhesive gel material with the vacuum substantially turned off.

4. (Currently amended) The method of claim 2-2, wherein said using the adhesive property to hold the semiconductor wafer to the platform includes providing substantial surface contact between the adhesive gel material and the first side of the semiconductor wafer.

5. (Currently amended) The method of claim 1, wherein said allowing the adhesive gel material to release the semiconductor wafer from the platform includes applying a vacuum to the gel material to substantially pull the adhesive gel material off the first side of the semiconductor wafer.

6. (Currently amended) The method of claim 4-1, wherein said applying the adhesive gel material to at least a portion of the first side of the semiconductor wafer includes applying the adhesive gel material to an upper surface of an un-diced semiconductor wafer.

7. (Currently amended) The method of claim 6, further comprising after grinding the second side of the semiconductor wafer, ~~which comprises a lower surface of the semiconductor wafer:~~

washing the semiconductor wafer;
mounting the semiconductor wafer; and
dicing the semiconductor wafer.

8. (Currently amended) The method of claim 1, further comprising prior to applying the adhesive gel material to the first side of the semiconductor wafer, cutting and severing the semiconductor wafer into a plurality of portions with the portions remaining proximally disposed to each other as if the semiconductor wafer had not been cut, and wherein said applying the adhesive gel material to the first side of the semiconductor

wafer includes applying the adhesive gel material to ~~an upper surface~~ the first side of at least ~~a partially diced~~ the as-if-uncut semiconductor wafer.

9. (Currently amended) The method of claim 8, further comprising after grinding the second side of the as-if-uncut semiconductor wafer, ~~which comprises a lower surface of the semiconductor wafer,~~ mounting the grinded as-if-uncut semiconductor wafer that ~~has had its lower surface grinded.~~

10. (Currently amended) The method of claim 1, wherein said applying the adhesive gel material to the first side of the semiconductor wafer includes applying the adhesive gel material to an upper surface of a selected one of flip chip bump wafer ~~or~~ and non-bump wafer.

11. (Currently amended) The method of claim ~~4~~ 1, wherein said applying the adhesive gel material includes applying ~~a~~ an adhesive gel material including semi-solid particles.

12. (Currently amended) The method of claim ~~4~~ 11, wherein said allowing the adhesive gel material to release the semiconductor wafer from the platform includes applying a vacuum to draw the ~~membrane~~ adhesive gel material away from the first side of the semiconductor wafer.

13. (Currently amended) The method of claim ~~4~~ 1, wherein said applying the adhesive gel material to the first side of the semiconductor wafer includes applying the adhesive gel material to an upper surface of a semiconductor wafer having surface structures.

14. (Currently amended) The method of claim ~~4~~ 13, wherein said applying the adhesive gel material to an upper surface of a semiconductor wafer having surface

structures includes applying the adhesive gel material to an upper surface of a semiconductor wafer having the surface structures include bumps.

15. (Currently amended) The method of claim 13-13, wherein said applying the adhesive gel material to an upper surface of a semiconductor wafer having surface structures includes applying the adhesive gel material to an upper surface of a semiconductor wafer having the surface structures include electronic circuitry.

16. (Currently amended) A method, comprising:

applying a gel material including particles to a first side of a semiconductor wafer, having a first side, and a second-sides side, and one or more surface structures disposed thereon, to provide substantial surface contact between the gel material and the surface structures on the first side, the particles capable of allowing the adhesive gel material to release the semiconductor wafer and preventing substantial collapse of the adhesive gel material if a vacuum suction is applied to the first side of the semiconductor wafer;

placing the semiconductor wafer on a vacuum chuck with the first side facing the vacuum chuck and with the gel material between the wafer and the vacuum chuck;

grinding the second side while using the gel material to hold the semiconductor wafer against the vacuum chuck; and

removing the semiconductor wafer, substantially free of the adhesive gel material, from the vacuum chuck by reducing surface contact between the gel material and the surface structures.

17. (Currently amended) The method of claim 16, wherein said applying the gel material to the first side of the semiconductor wafer includes applying the gel material to a surface of at least one of a selected one of a flip-chip bump wafer and a non-bump wafer.

18. (Currently amended) The method of claim ~~46-16~~, wherein said applying the gel material to the first side of the semiconductor wafer includes applying the gel material to a semiconductor wafer having ~~the surface structures comprise~~ electronic circuitry.

19. (Currently amended) The method of claim ~~46-16~~, wherein said applying the gel material to the first side of the semiconductor wafer includes applying the gel material to a semiconductor wafer having ~~the surface structures comprise~~ bumps.

20. (Currently amended) The method of claim ~~46-16~~, wherein said reducing surface contact between the gel material and the surface structures includes activating the vacuum chuck.

21. (Currently amended) The method of claim ~~46-16~~, wherein said applying the gel material to the first side of the semiconductor wafer includes applying a gel material ~~the gel material includes~~ including semi-solid particles.

22. (Currently amended) The method of claim ~~46-16~~, wherein said applying the gel material to the first side of the wafer includes applying a semi-solid material to an upper surface of the wafer, the semi-solid material capable ~~to be prevent~~ of preventing substantial collapse of ~~a gel membrane of~~ the gel material into the vacuum chuck.

23. (Currently amended) The method of claim 16, further comprising after removing the semiconductor wafer from the vacuum chuck:

washing the semiconductor wafer;
mounting the semiconductor wafer; and
dicing the semiconductor wafer.

24. (Currently amended) The method of claim 16, further comprising ~~dicing the wafer before~~ prior to applying the gel material to the first side of the semiconductor

wafer, dicing the semiconductor wafer, the dicing being performed in a manner that allows the dice to remain proximally disposed to each other as semiconductor wafer had not been cut, and wherein said applying the adhesive gel material to the first side of the semiconductor wafer includes applying the adhesive gel material to the first side of the as-if-undiced semiconductor wafer.

25. (Currently amended) The method of claim ~~24~~24, wherein said dicing the semiconductor wafer includes the wafer is diced cutting the semiconductor wafer to a depth deeper than a final desired depth of the semiconductor wafer.

26. (Currently amended) The method of claim 16, further comprising using a vacuum transfer device to transfer the semiconductor wafer from the vacuum chuck onto a surface for mounting.

27. (Currently amended) The method of claim ~~16~~16, wherein said grinding the second side of the semiconductor wafer while using the adhesive gel material to hold the wafer against the vacuum chuck includes absorbing at least some of a grinding force applied to the second side of the semiconductor wafer.

28. (Withdrawn) A material, comprising:
an adhesive gel material;
semi-solid particles within the adhesive gel material; and
wherein the adhesive gel material forms a membrane surface to hold a first side of a semiconductor wafer to a surface of a vacuum chuck during wafer grinding of a second side of the semiconductor wafer.

29. (Withdrawn) The material of claim 28 wherein the semi-solid particles within the adhesive gel material form a structure to substantially prevent the membrane surface

from collapsing to the surface of the vacuum chuck when the vacuum chuck is activated.

30. (Withdrawn) The material of claim 28 wherein the semi-solid particles within the adhesive gel material includes organic particles.